

GELOY™ RESIN HRA170D

REGION EUROPE

DESCRIPTION

GELOY HRA170D resin is a PC-ASA blend with permanent antistatic behavior. It is typically used in applications that require antidust properties and high impact retention. GELOY HRA170D resin is typically used in various outdoor and indoor applications requiring superior heat aging properties and colour stability.

TYPICAL PROPERTY VALUES

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	54	MPa	ASTM D638
Tensile Stress, brk, Type I, 50 mm/min	59	MPa	ASTM D638
Tensile Stress, yld, Type I, 5 mm/min	50	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	58	MPa	ASTM D638
Tensile Strain, yld, Type I, 50 mm/min	5	%	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	140	%	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	5	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	160	%	ASTM D638
Tensile Modulus, 5 mm/min	2160	MPa	ASTM D638
Tensile Stress, yield, 5 mm/min	51	MPa	ISO 527
Tensile Stress, break, 5 mm/min	65	MPa	ISO 527
Tensile Stress, yield, 50 mm/min	54	MPa	ISO 527
Tensile Stress, break, 50 mm/min	58	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	5	%	ISO 527
Tensile Strain, break, 5 mm/min	130	%	ISO 527
Tensile Strain, yield, 50 mm/min	5	%	ISO 527
Tensile Strain, break, 50 mm/min	130	%	ISO 527
Tensile Modulus, 1 mm/min	2150	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	80	MPa	ISO 178
Flexural Modulus, 2 mm/min	2100	MPa	ISO 178
Ball Indentation Hardness, H358/30	63	MPa	ISO 2039-1
Hardness, Rockwell L	57	-	ISO 2039-2
Hardness, Shore D	77	-	ISO 868
IMPACT			
Izod Impact, notched, 23°C	450	J/m	ASTM D256
Izod Impact, notched, -30°C	140	J/m	ASTM D256
Izod Impact, notched 80*10*4 +23°C	45	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	14	kJ/m ²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	45	kJ/m ²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm	17	kJ/m ²	ISO 179/1eA
THERMAL			
HDT, 1.82 MPa, 3.2mm, unannealed	106	°C	ASTM D648
Vicat Softening Temp, Rate A/50	137	°C	ISO 306
Vicat Softening Temp, Rate A/120	138	°C	ISO 306

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Vicat Softening Temp, Rate B/50	121	°C	ISO 306
Vicat Softening Temp, Rate B/120	122	°C	ISO 306
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	127	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	104	°C	ISO 75/Af
PHYSICAL			
Specific Gravity	1.16	-	ASTM D792
Melt Flow Rate, 220°C/10.0 kgf	8.5	g/10 min	ASTM D1238
Melt Flow Rate, 260°C/5.0 kgf	30	g/10 min	ASTM D1238
Density	1.16	g/cm³	ISO 1183
Melt Flow Rate, 220°C/10.0 kg	8	g/10 min	ISO 1133
Melt Volume Rate, MVR at 220°C/10.0 kg	8	cm³/10 min	ISO 1133
Melt Volume Rate, MVR at 260°C/5.0 kg	29	cm³/10 min	ISO 1133
ELECTRICAL			
Surface Resistivity, ROA	1.E+13	Ω	IEC 60093
INJECTION MOLDING			
Drying Temperature	85 – 95	°C	
Drying Time	3 – 4	Hrs	
Drying Time (Cumulative)	8	Hrs	
Maximum Moisture Content	0.04	%	
Melt Temperature	255 – 270	°C	
Nozzle Temperature	235 – 255	°C	
Front - Zone 3 Temperature	245 – 260	°C	
Middle - Zone 2 Temperature	235 – 255	°C	
Rear - Zone 1 Temperature	230 – 250	°C	
Mold Temperature	60 – 85	°C	
Back Pressure	0.3 – 1	MPa	
Screw Speed	30 – 80	rpm	
Shot to Cylinder Size	40 – 80	%	
Vent Depth	0.038 – 0.076	mm	